SECTION 10

SIDE MONITOR

Side monitor —

The side monitor assists the driver in checking the safety of the vehicle's surroundings by displaying an image of the view in front of and to the side of the front passenger side of the vehicle. The side camera is mounted on the underside of the front passenger side outside rear view mirror.

The side monitor can be activated even when the outside rear view mirrors are folded.

CAUTION

- **Always make sure to check all around the vehicle with your own eyes when driving.**
- **Due to the property of the side camera lens, the position of and distance to people or objects displayed differs from actual position and distance. (See page 328.)**
- **Never depend on the side monitor only. Use caution just as you would when driving any other vehicle.**
- **Never drive while looking only at the screen as the image on the screen is different from actual conditions. If you drive while looking only at the screen, you may hit a person or an object, resulting in an accident. When driving, be sure to check the vehicle's surroundings with your own eyes and the vehicle's mirrors.**
- **Do not use the side monitor in the following cases:**
  - **On icy or slick road surfaces, or in snow**
  - **When using tire chains or emergency tires**
  - **When the hood or the front passenger door is not completely closed**
  - **On roads that are not flat, such as slopes**
- **When the outside temperature is low, the displayed image may become faint or dark. Moving images will be distorted or not entirely visible, so be sure to check the vehicle's surroundings with your own eyes and the vehicle's mirrors while driving.**

NOTICE

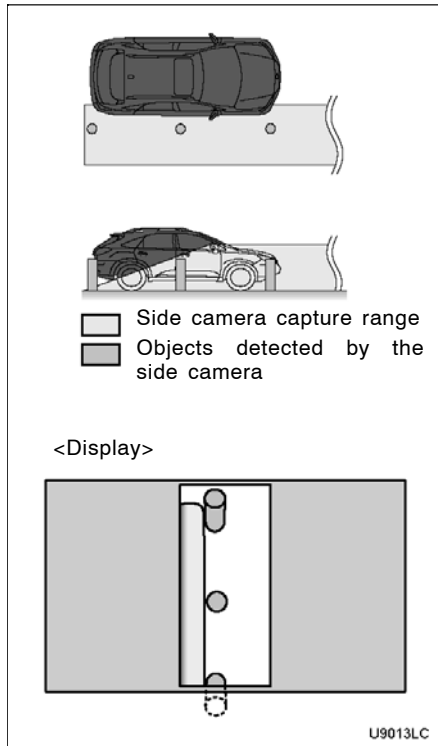
When replacing the tires, please consult your Lexus dealer. If you replace the tires, the area displayed on the screen may change.

INFORMATION

- *The area displayed on the screen may vary according to vehicle status or road conditions.*
- *The area of the image captured by the side camera is limited. The side camera does not display objects too close to or directly under the corners of the bumpers on the front passenger side.*
- *Due to the property of the side camera lens, the perceived distance from images that appear on the screen differs from the actual distance.*
- *In the following cases, it may become difficult to see the images on the screen, but this is not a malfunction:*
  - *In the dark (for example, at night)*
  - *When the temperature near the lens is high or low*
  - *When there are water droplets on the camera lens, or when humidity is high (for example, when it rains)*
  - *When foreign matter such as mud is stuck to the side camera*
  - *When the camera has scratches or dirt on it*
  - *When the sun or the beam of headlights is shining directly into the camera lens*
- *The following symptoms may occur, but do not indicate a malfunction:*
  - *The camera may fog up when humidity is high (for example, when it rains).*
  - *When driving at night, ambient lights such as the lights of the vehicles ahead and building lighting may be reflected into the image.*
- *The center or four corners of the image may decrease in definition.*
- *As the procedure is the same, follow the instructions for navigation screen adjustment to adjust the side monitor. (See page 36.)*
- *When the outside rear view mirrors are folded, the mirror base obstructs the side camera's view. In this case, the driver cannot use the side monitor to check the area in front of the vehicle.*

— Area displayed on the screen

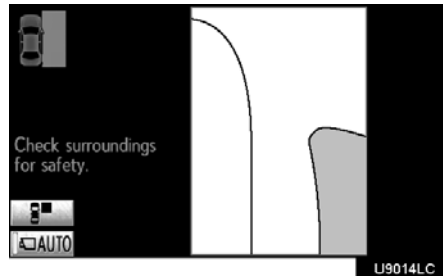
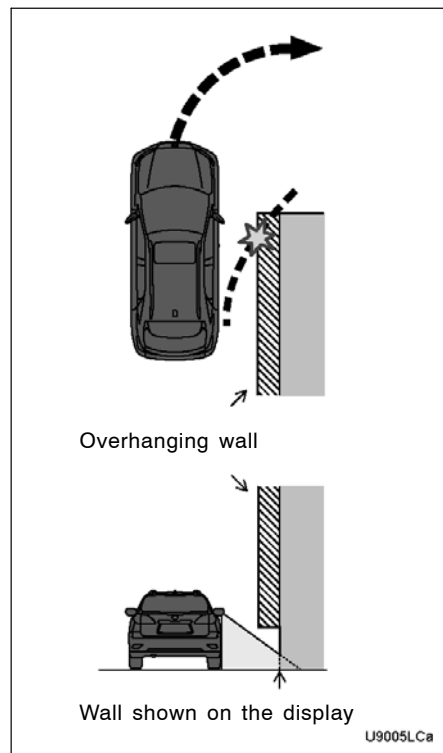
<Area of the image captured by the side camera>

The front passenger side of the vehicle is displayed on the screen.

- **When a 3−dimensional object is near the vehicle**

If a 3−dimensional object such as an over-hanging wall is present near the vehicle, observe the following precautions to avoid a collision:

WHEN THE COURSE IS NEAR AN OBSTACLE

<Display>

<Vehicle status>

On the display, it appears that the vehicle will not hit the wall. In reality, the overhanging part of the wall is in the way, and the vehicle may collide with it. When the course is close to an obstacle, be sure to check the vehicle's surroundings with your own eyes and the vehicle's mirrors.

● **Side camera**

NOTICE

Observe the following precautions to ensure that the side monitor functions properly:

- ***Do not hit the camera or subject it to strong impacts as this may cause its position and mounting angle to change.***
- ***As the camera is water proof, do not detach, disassemble or modify it. Doing so may cause incorrect operation.***
- ***Do not scrub the camera lens roughly or clean it with a hard brush or abrasive cleaner. Doing so may damage the lens and adversely affect the image.***
- ***As the camera cover is resin, do not allow organic solvent, car wax, window cleaner or glass coating agent to adhere to it. If this happens, wipe clean as soon as possible.***
- ***Do not expose the side camera to sudden temperature changes such as by pouring hot water on the vehicle in cold weather.***
- ***If the side camera is hit, its position and mounting angle may change. Be sure to have the side camera checked by your Lexus dealer.***
- ***Be careful when driving on rough roads as the surface of the camera may be damaged by flying stones or other debris.***
- ***When washing the vehicle, do not apply intensive bursts of water to the camera or camera area. Doing so may result in the camera malfunctioning.***

INFORMATION

If the camera lens becomes dirty, it cannot transmit a clear image. If water droplets, snow, or mud adhere to the lens, rinse with water and wipe with a soft cloth. If the lens is extremely dirty, wash it with a mild cleanser and rinse.

If a bright light (for example, sunlight reflected off the vehicle body) is picked up by the side camera, the smear effect* peculiar to CCD cameras may occur.

*: Smear effect is a phenomenon that occurs when a bright light (for example, sunlight reflected off the vehicle body) is picked up by the camera; when transmitted by the camera, the light source appears to have a vertical streak above and below it.

When the camera is used under fluorescent lights, sodium lights, or mercury lights etc., the lights and the illuminated areas may appear to flicker.

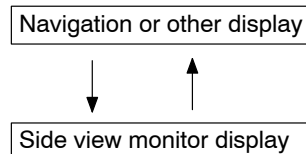
— Activating the side monitor

To display the side view, push the side camera button with the "POWER" <"ENGINE START STOP"> switch in ACCESSORY or ON <IGNITION ON> mode and vehicle speed at 7 mph (12 km/h) or less.

- Pushing the side camera button again changes the screen back to the previously displayed screen, such as navigation screen. Each push of the button changes the screen as follows:

Navigation or other display

↓ ↑

Side view monitor display

- If the side camera button is pushed when the rear view monitor system is displayed, the side monitor will appear.

- **Cancelation of the side monitor**

In the following situations, the side monitor will be canceled:

When vehicle speed exceeds approximately 7 mph (12 km/h)

When the side camera button is pushed

When the shift lever is shifted to “R”.

Any of the mode buttons on the Remote Touch, such as **“MENU”** is pushed.

— Side monitor

The image captured by the side camera is displayed on the screen.

This image can be used to help check the safety of the front passenger side of the vehicle when making a turn to that side, as well as when starting off and stopping.

- **Button on the screen**

1 **Display area button**

Selecting this button changes between overall view and enlarged front view. (See page 334.)

2 **Automatic display button**

Selecting this button puts the side monitor in automatic display mode.

- Select this button to turn automatic display mode on/off.
- The indicator on the button illuminates during automatic display mode.

(a) Automatic display mode

In addition to being able to display the side view using the side camera button, automatic display mode is available. In automatic display mode, the side monitor is activated automatically according to vehicle speed.

In automatic mode, the side monitor will automatically appear in the following situations:

- When the shift lever is shifted to a forward driving position or “N”
- When vehicle speed is reduced to approximately 6 mph (10 km/h) or less with the shift lever in any position other than “R”

- **Setting automatic display mode**

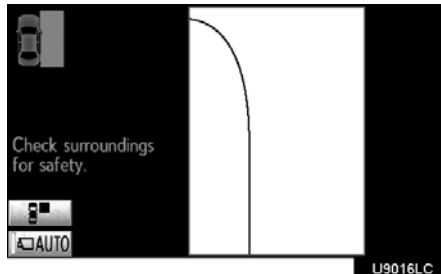
Select the automatic display button.

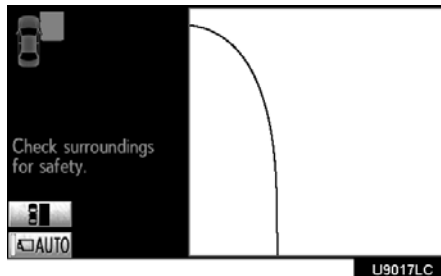
Side monitor (See page 331.)

(b) Display area modes

The side view monitor system has the following 2 display area modes:

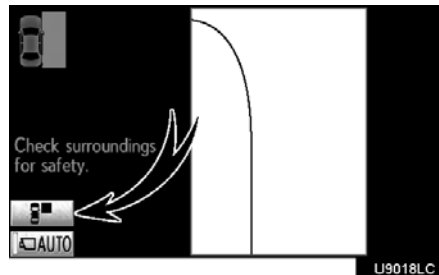
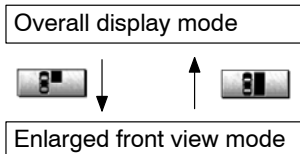
Overall display mode:

<Overall display mode>

This default mode displays the entire view captured by the camera.

<Enlarged front view mode>

This mode can be used when an enlarged front view is needed.

- This mode is not available when the outside rear view mirrors are folded.

- **Changing display area modes**

Select the display area button.

- Each time the button is selected, the mode will change as follows:

- When the outside rear view mirrors are folded, enlarged front view mode is not available. (The display area button will not be displayed on the screen.)
- If the outside rear view mirrors are folded when the screen is in enlarged front view mode, the screen will automatically change to overall display mode. After changing to overall display mode, the screen will not return to enlarged front view mode even if the mirrors are extended.

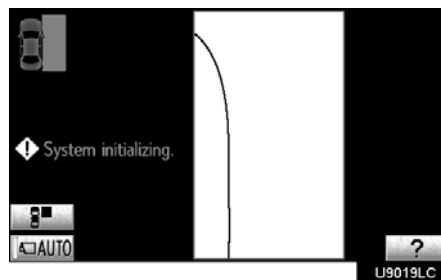
CAUTION

When the side monitor is in enlarged front view mode, the target object may not be shown on the screen. Even if the object is not visible, do not readjust the steering wheel or steer outside the guide lines until the vehicle passes the object as this may result in a collision.

— When the 12–volt battery is disconnected or the system initialization screen appears on the display

In the following situations, be sure to perform the initialization procedure:

- When the 12–volt battery is disconnected
- When the side monitor changes to the system initialization screen due to 12–volt battery discharge

<System initialization screen>

- **Initialization procedures**

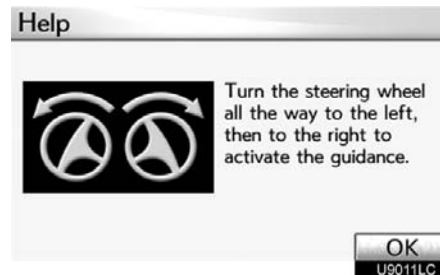
Perform either of the following procedures:

- With the vehicle stopped in a safe place, turn the steering wheel all the way to the left, then all the way to the right. (It does not matter which direction you turn the wheel to first.)
- Drive on a straight, uncongested road for approximately 5 minutes or more.

When the screen returns to the original display, correction is complete.

NOTICE

If the initialization screen remains on after performing initialization procedures, have the vehicle inspected by your Lexus dealer.

Select "?" on the initialization screen to show the help screen.

When the procedure shown on the display has been performed and the screen returns to the original display, the setting is complete.

If the initialization screen or the help screen remains on, have the system inspected by your Lexus dealer.

Selecting **"OK"** will return the display to the initialization screen.